A photograph of construction workers in hard hats and safety gear working on a concrete slab. They are laying out a grid of green rebar. The workers are in a line, bent over, focused on their task. The background shows a wooden structure and a body of water under a clear sky. The image is framed with a blue and black curved border at the top and bottom.

## BEST VALUE FOR EVERY DOLLAR SPENT

*Tangible Result Driver – Roberta Broeker, Chief Financial Officer*

Providing the best value for every dollar spent means MoDOT is running its business as efficiently and effectively as possible. A tightly managed budget means more roads and bridges can be fixed. That keeps Missouri moving. This is one of MoDOT's values because every employee is a taxpayer too!



## Number of full-time equivalencies expended-16a

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Steve Meystrik, Special Projects Coordinator

**Purpose of the Measure:**

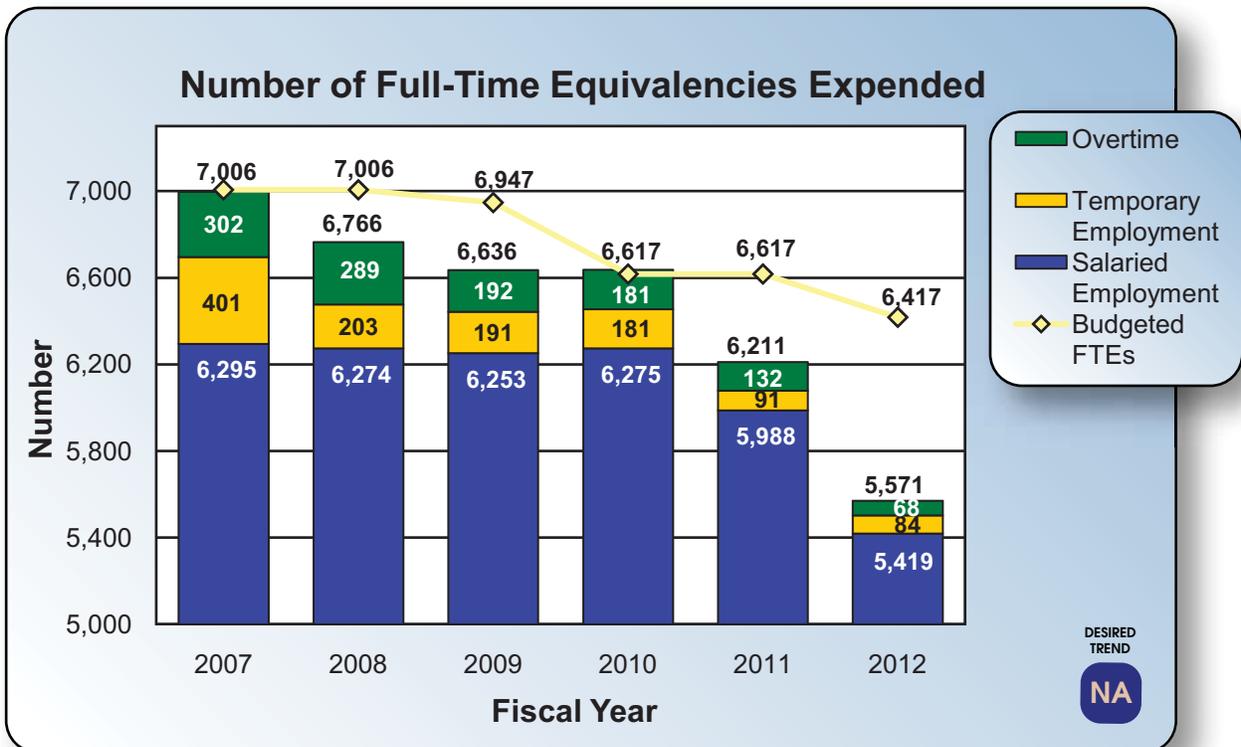
This measure tracks the change in the number of full-time equivalencies (FTEs) expended within the department and compares it to the number of FTEs in the legislative budget. The data provides a high-level view of overall staffing at MoDOT in relation to budgeted FTEs.

**Improvement Status:**

During FY 2012, MoDOT expended 5,571 FTEs which is 640 fewer FTEs than were expended in FY 2011. FTEs resulting from salaried employment decreased by 569 compared to last year as a result of MoDOT's continued implementation of its workforce reduction plan and Bolder Five-Year Direction approved on June 8, 2011. FTEs resulting from overtime decreased by 64, primarily as a result of less snowfall this winter compared to previous years and overtime administration strategies used to reduce expenditures in this area. There has been a slight decrease (seven) in the number of FTEs resulting from temporary employment compared to the same period last year. The percentage decrease in temporary employment is less than other FTE categories. This is a result of the department's continued use of temporary workers to close the staffing gap in full-time maintenance worker positions until such time as external hiring begins.

**Measurement and Data Collection:**

This measure converts the regular hours worked or on paid leave of temporary and salaried employees, as well as overtime worked (minus any hours that are flexed during the workweek), to FTEs. In order to convert these numbers to FTEs, the total number of hours worked or on paid leave is divided by 2,080. Salaried employment data is converted to an annual number for ease in comparison to previous years, whereas temporary employment and overtime data represent actual year-to-date calculations. This measure is updated quarterly.



## Number of lost workdays-16b

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Jeff Padgett, Risk and Benefits Management Director

### Purpose of the Measure:

This measure tracks the actual number of days that employees cannot work due to work-related injuries. This measure has changed to include all lost workdays, regardless of when injury occurred. Previously, measurement of lost workdays ended at the end of the calendar year in which the injury was incurred.

### Measurement and Data Collection:

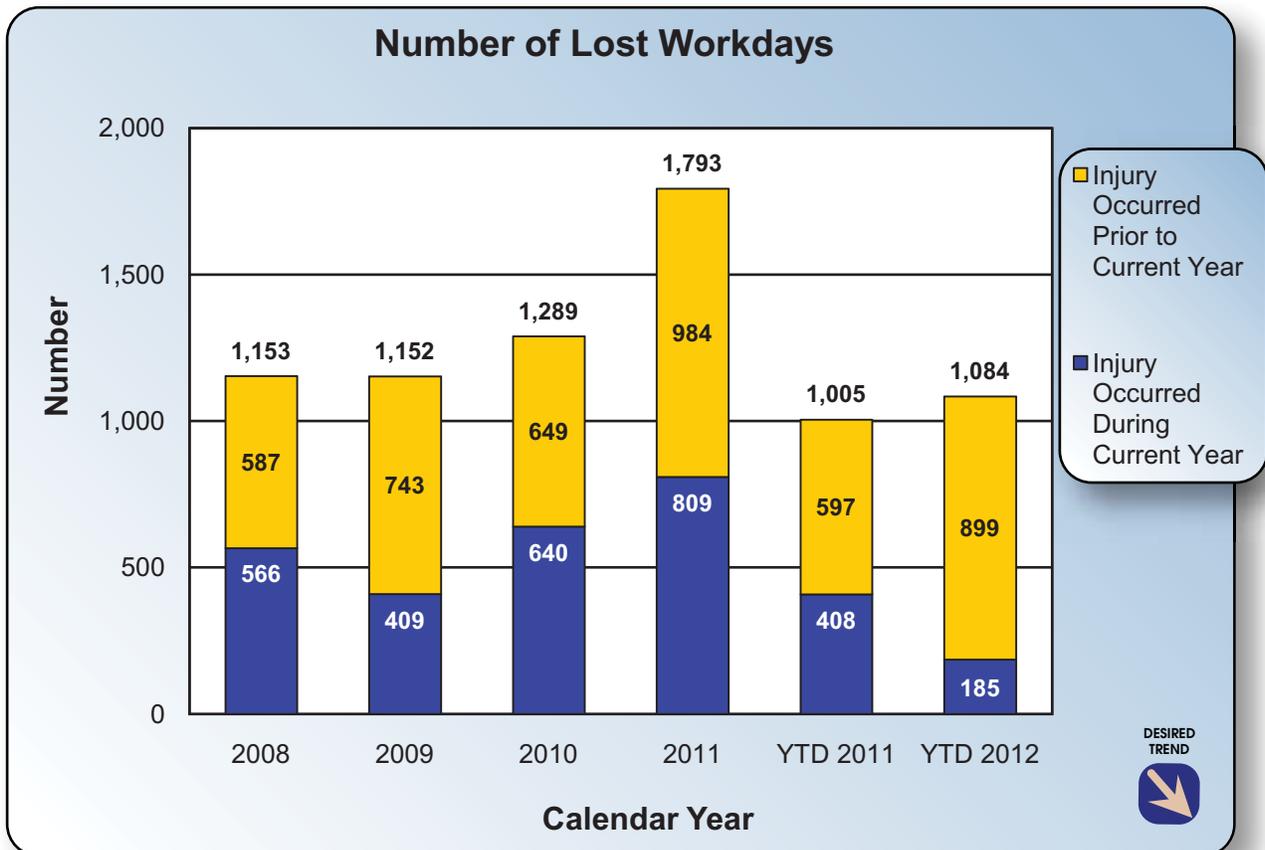
The data is collected from Riskmaster, a claims administration software. This measure is updated quarterly.

### Improvement Status:

The number of lost workdays for the first and second quarters of 2012 is 7.9 percent greater than the same

period in 2011, increasing from 1,005 to 1,084 lost workdays. Three motor vehicle incidents caused by a third party accounted for 34 percent of the lost workdays. These occurred in the St. Louis and Southeast districts. The Southwest District suffered two injuries in which an employee struck or was struck by MoDOT equipment. These accounted for 17 percent of the lost workdays. Another 12 percent of the lost workdays were attributable to a lifting incident in the Southwest District.

Two teams have made recommendations to improve the trend for this measure. One has recommended a new incentive program that began in July 2012. A second team has completed a comprehensive safety plan, which will include various strategies and implementation dates.



## Rate and total of MoDOT recordable incidents-16c

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Jeff Padgett, Risk and Benefits Management Director

### Purpose of the Measure:

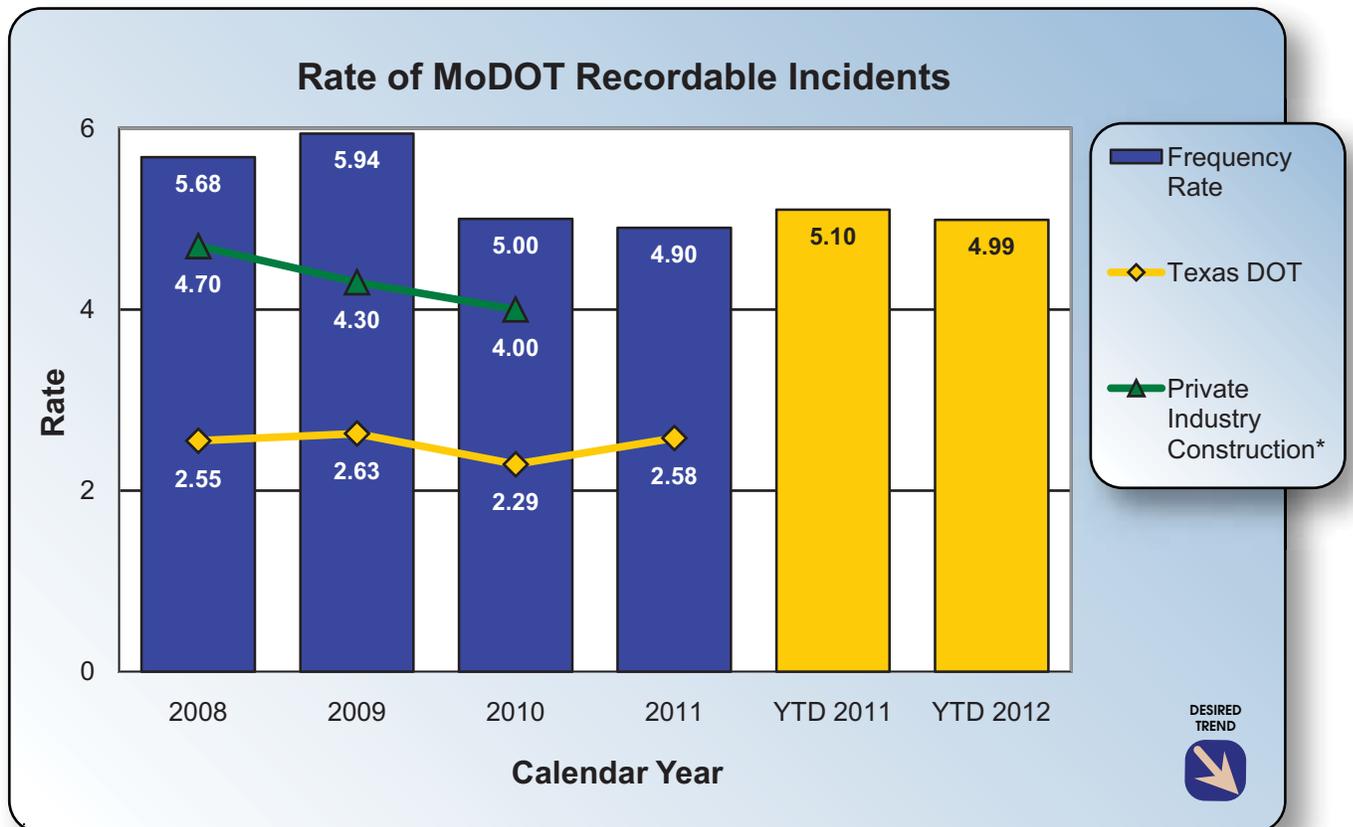
This measure tracks the number of recordable injuries, in total and as a rate of injuries per 100 workers. The calculation for incidence rate is the number of recordables times 200,000 divided by the number of hours worked. The 200,000 used in the calculation is the base for 100 full-time workers (working 40 hours per week, 50 weeks per year). MoDOT defines a recordable incident as a work-related injury or illness that results in death, days away from work, or medical treatment resulting in cost to the department.

### Measurement and Data Collection:

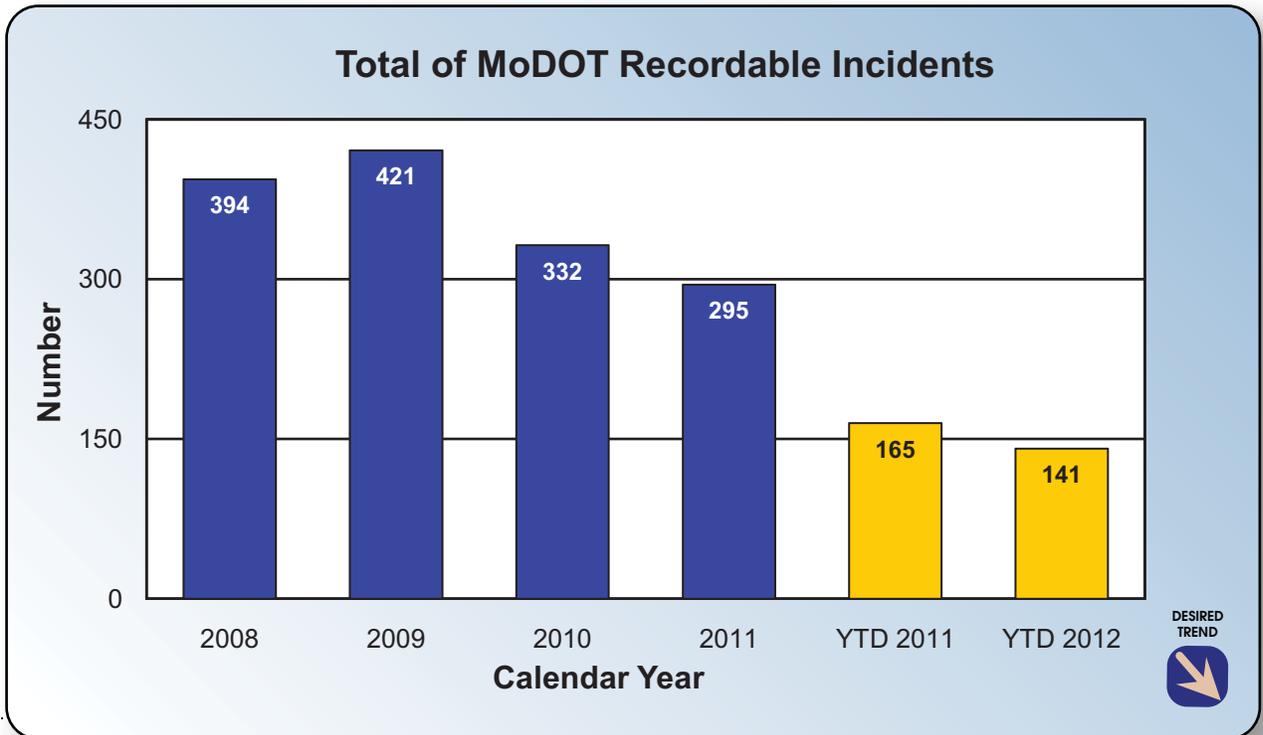
The injury data is collected from Riskmaster, a claims administration software. The number of hours worked is taken from MoDOT's payroll data. This measure is updated quarterly.

### Improvement Status:

The number of MoDOT recordables and incident rate have both decreased from the first and second quarters of 2011 to the first and second quarters of 2012. The number of MoDOT recordables decreased by 15 percent over the period, with a decrease from 165 to 141. The incident rate decreased by 2 percent over the reporting period, dropping from 5.1 to 4.99.



(\*Information from Private Industry Construction is not available for 2011.)



## Number of claims and amount paid for general liability-16d

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Jeff Padgett, Risk and Benefits Management Director

### Purpose of the Measure:

General liability claims arise from allegations of injuries/damages caused by the dangerous condition of MoDOT property and the injury/damage directly resulted from the dangerous condition. In addition, an employee must be negligent and create the dangerous condition or MoDOT must have actual or constructive notice of the dangerous condition in sufficient time prior to the injury/damage to have taken measures to protect the public against the dangerous condition. This measure tracks the number of general liability claims filed and amount paid

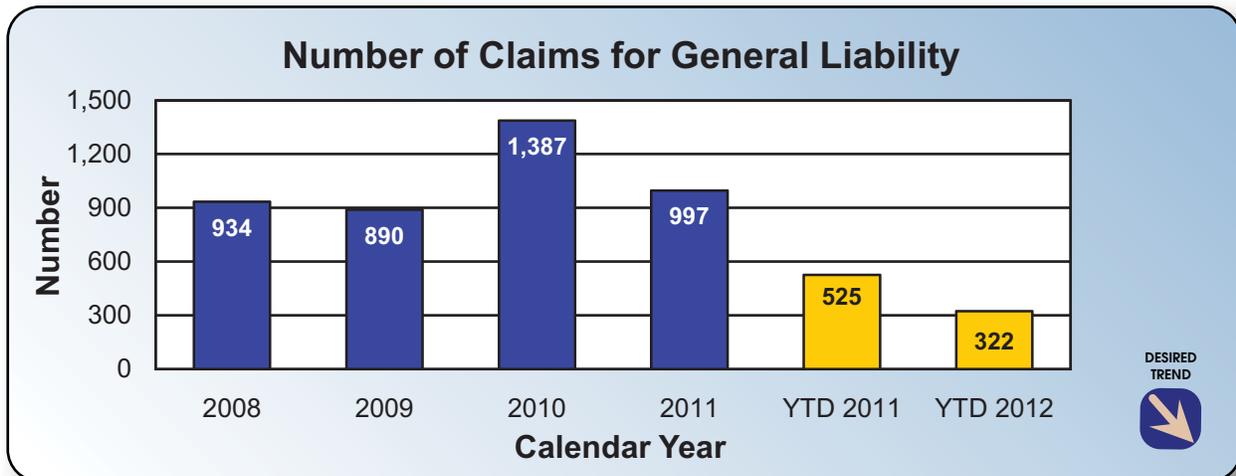
Riskmaster, the Risk Management claims administration software.

### Improvement Status:

Our desired outcome is a reduction in the number of claims and amount of payments. The year-to-date number of claims is down 39 percent and payments are up 91 percent compared to the same period in 2011. The increase in payments is attributed to seven litigated claims resulting in payments totaling \$2,730,607. These seven claims account for 65 percent of the total amount paid.

### Measurement and Data Collection:

Risk and Benefits Management reports on the measure quarterly and collects the claims data from



## Percent of vendor invoices paid on time-16e

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Amy Blankenship, Financial Services Manager

**Purpose of the Measure:**

This measure tracks the department’s timeliness in processing vendor payments.

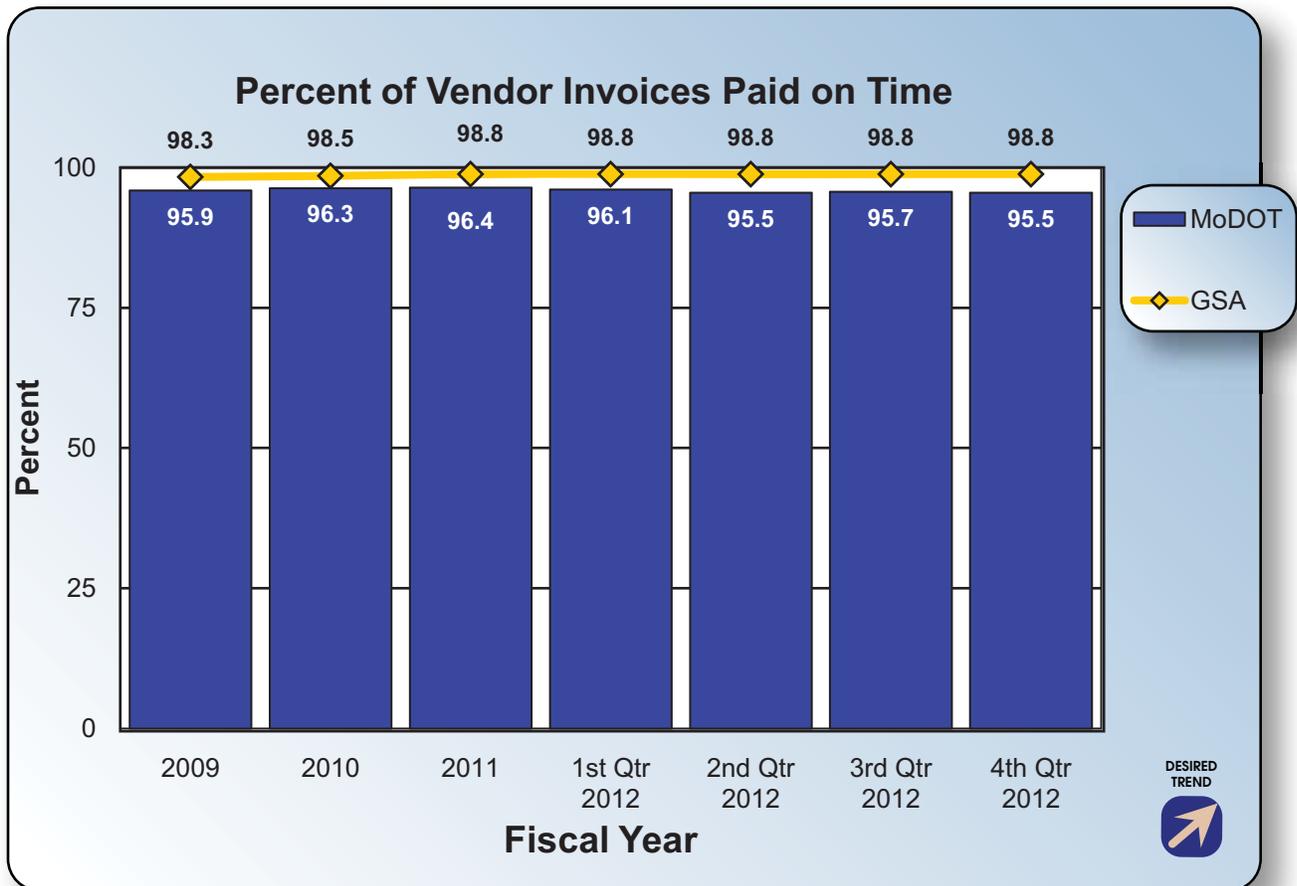
**Measurement and Data Collection:**

The check date determines if the invoice payment is timely. Vendors age their receivables based on the date of the invoice; therefore, timely is defined as a check issued less than 31 days from the date of invoice. The department’s measure is benchmarked to the U.S. General Services Administration (GSA),

which is updated annually with the federal fiscal year calendar ending Sept. 30. This measure was first reported in fiscal year 2006 with 82.9 percent of the invoices being paid timely. This measure is updated quarterly.

**Improvement Status:**

The measure indicates a slight decrease from the third quarter of fiscal year 2012. The slight decline is largely attributed to the placement and training of new staff during the Bolder Five-Year Direction.



## Distribution of expenditures-16f

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Christina Wilkerson, Financial Services Manager

### Purpose of the Measure:

The purpose of the measure is to demonstrate a responsible use of taxpayers' money, with the emphasis of spending on our transportation system.

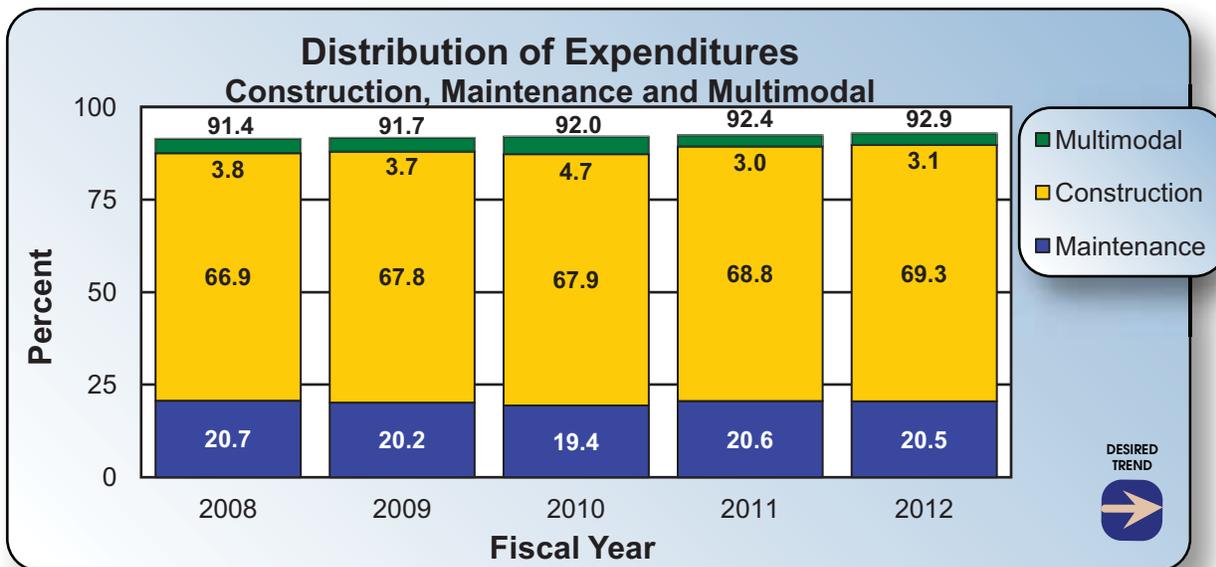
### Measurement and Data Collection:

The data collection is based on cash expenditures by appropriation on a quarterly basis. Construction, maintenance and multimodal expenditures are defined as expenditures from the construction, maintenance and multimodal appropriations. Other expenditures include administration, fleet, facilities, and information systems (FFIS), motor carrier and highway safety appropriations. Debt service appropriations are not included. This measure is updated quarterly.

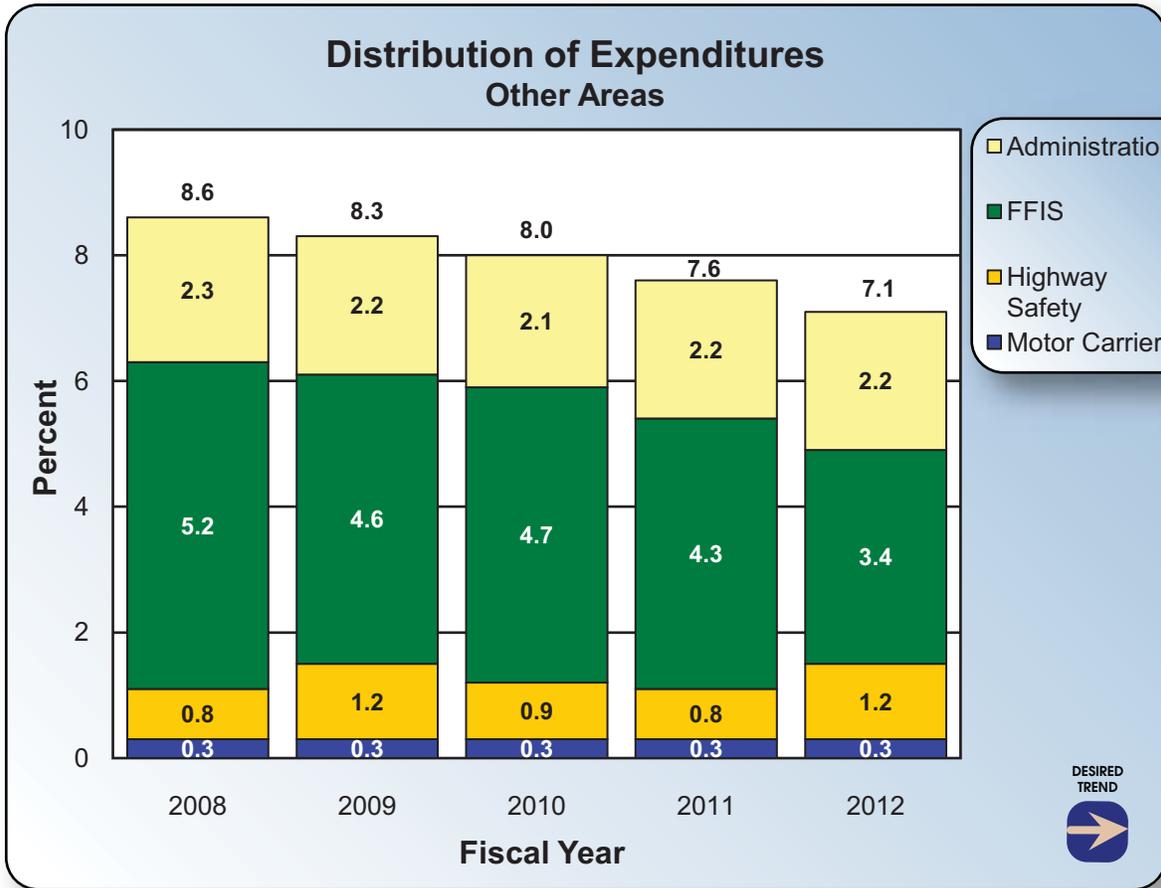
### Improvement Status:

MoDOT's emphasis is on expenditures for routine maintenance of the system (maintenance appropriation), rehabilitation and construction of the

system (construction appropriation) and other modes of transportation (multimodal appropriations). Total expenditures have decreased by \$176.6 million from this fiscal year compared to last fiscal year. The largest reduction is reflected in the decrease in the construction program dollars as a result of decreased funding. The percentage of expenditures for maintenance remains comparable to last fiscal year. Administration and motor carrier percentages have remained constant compared to last fiscal year while highway safety increased slightly and FFIS decreased compared to last fiscal year. FFIS decreased as a result of the Bolder Five-Year Direction. Highway Safety increased as a result of the programming and timing of related expenditures for hazard elimination projects such as guard cable installation, shoulder work and rumble stripes or specific projects such as the Cole County Route 54 intersection safety improvements.



	2008	2009	2010	2011	2012
<b>Construction</b>	1,377,328	1,533,866	1,617,246	1,549,412	1,437,440
<b>Maintenance</b>	424,815	457,020	462,490	463,608	424,209
<b>Multimodal</b>	77,265	83,007	112,298	67,533	64,093
<b>Total</b>	<b>1,879,408</b>	<b>2,073,893</b>	<b>2,192,034</b>	<b>2,080,553</b>	<b>1,925,742</b>



	2008	2009	2010	2011	2012
<b>Administration</b>	46,808	49,214	49,451	48,787	46,858
<b>FFIS</b>	106,343	104,635	111,564	96,972	70,110
<b>Motor Carrier</b>	6,930	7,095	6,963	6,498	5,813
<b>Highway Safety</b>	17,064	26,531	21,543	17,182	24,844
<b>Total Other Areas</b>	<b>177,145</b>	<b>187,475</b>	<b>189,521</b>	<b>169,439</b>	<b>147,625</b>

<b>Total Expenditures</b>	<b>2,056,553</b>	<b>2,261,368</b>	<b>2,381,555</b>	<b>2,249,992</b>	<b>2,073,367</b>
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## Accuracy of state and federal revenue projections-16g

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Kelly Wilson, Senior Financial Services Analyst

### Purpose of the Measure:

This measure shows the precision of state and federal revenue projections. Projections are used to prepare the budget that funds MoDOT’s operations and capital program.

### Measurement and Data Collection:

State revenue includes three major components of taxes and fees paid by highway users: motor fuel taxes, motor vehicle and driver licensing fees, and motor vehicle sales and use taxes. This measure does not include interest earnings and miscellaneous revenue, which are also considered state revenues. The measure provides the cumulative, year-to-date percent variance of actual state revenue versus projected state revenue by state fiscal year.

Federal revenue is the amount available to obligate in a federal fiscal year for formula apportionments. Formula apportionments are distributed to states via federal law. The measure provides the variance of actual federal revenue versus projected federal revenue by federal fiscal year.

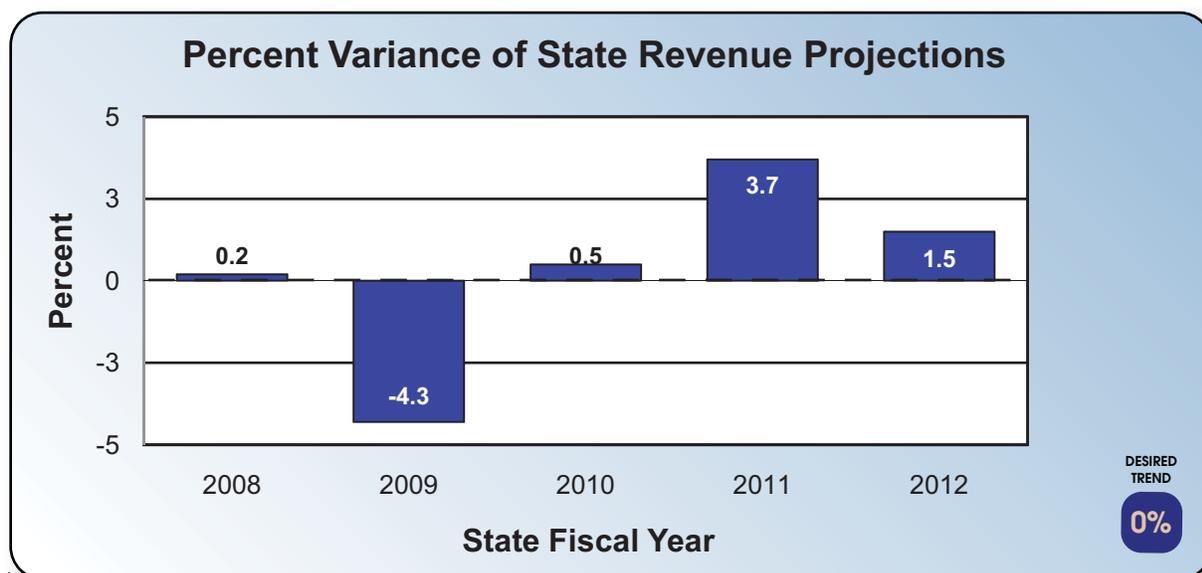
State and federal revenue projections are based on the department’s current financial forecast. State revenue data is updated quarterly. Federal revenue data is updated annually in October.

### Improvement Status:

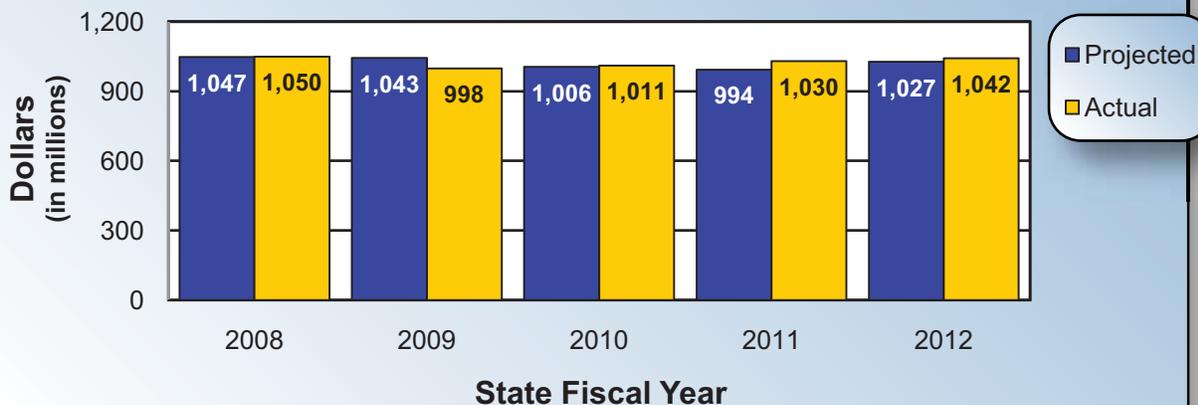
Actual state revenue was more than projected for fiscal year 2012. Projected revenue was \$1,026.9 million. However, actual receipts were \$1,042.2 million, a difference of \$15.3 million and a positive variance of 1.5 percent. The receipts were \$12 million, or 1.2 percent, more than FY 2011. Motor vehicle sales and use tax receipts were higher than projected, while motor fuel tax and motor vehicle and driver licensing fees were slightly lower than projected.

Actual federal revenue was more than projected for FY 2011. The projected revenue was \$840.0 million. However, the actual revenue was \$912.8 million, a difference of \$72.8 million and a positive variance of 8.7 percent. MoDOT received additional revenue because: 1) discretionary funding programs continued and were categorized as formula funds in federal fiscal year 2011; and 2) \$17.2 million of additional funding became available through the annual August redistribution process.

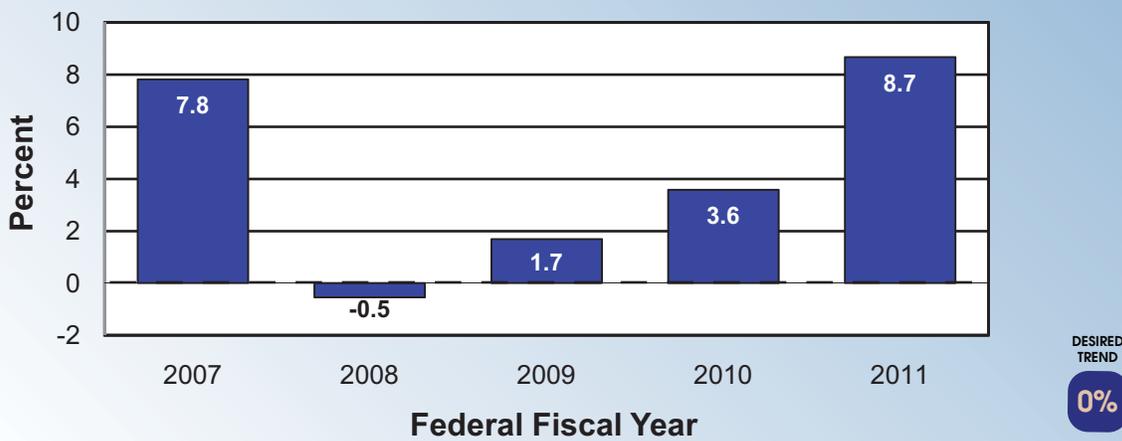
The desired trend is for actual revenue to match projections with no variance. MoDOT staff adjusts future operating and capital budgets to account for these variances, if needed.



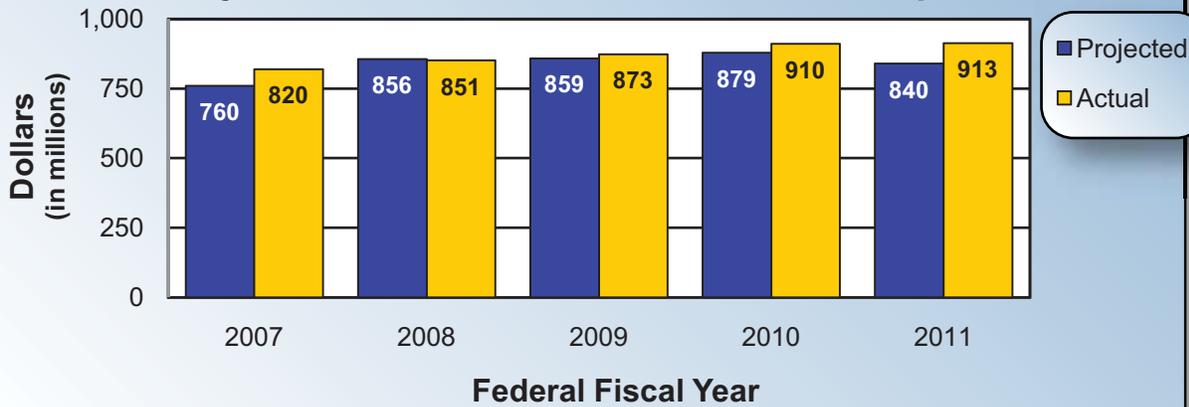
### Projected vs. Actual State Revenue Comparison



### Percent Variance of Federal Revenue Projections



### Projected vs. Actual Federal Revenue Comparison



### Number of excess properties conveyed and gross revenue generated from excess properties conveyed-16h

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Kelly Lucas, Right of Way Director

#### **Purpose of the Measure:**

The purpose of this measure is to track the number of excess parcels conveyed from MHTC ownership and to track the amount of revenue generated from the conveyance of excess property. In order to fulfill its stewardship role of asset management while observing practical business decisions, the department is proactively identifying and disposing of property that is no longer needed for the maintenance of the transportation system, will not be used for future expansion projects and is no longer needed for its operations. Funds received from the conveyance of excess properties are used to improve the condition of the state highway system. The districts use these funds to apply toward the costs associated with construction projects.

#### **Measurement and Data Collection:**

Data collection for this measure is reported on a quarterly basis from the realty asset inventory system.

#### **Improvement Status:**

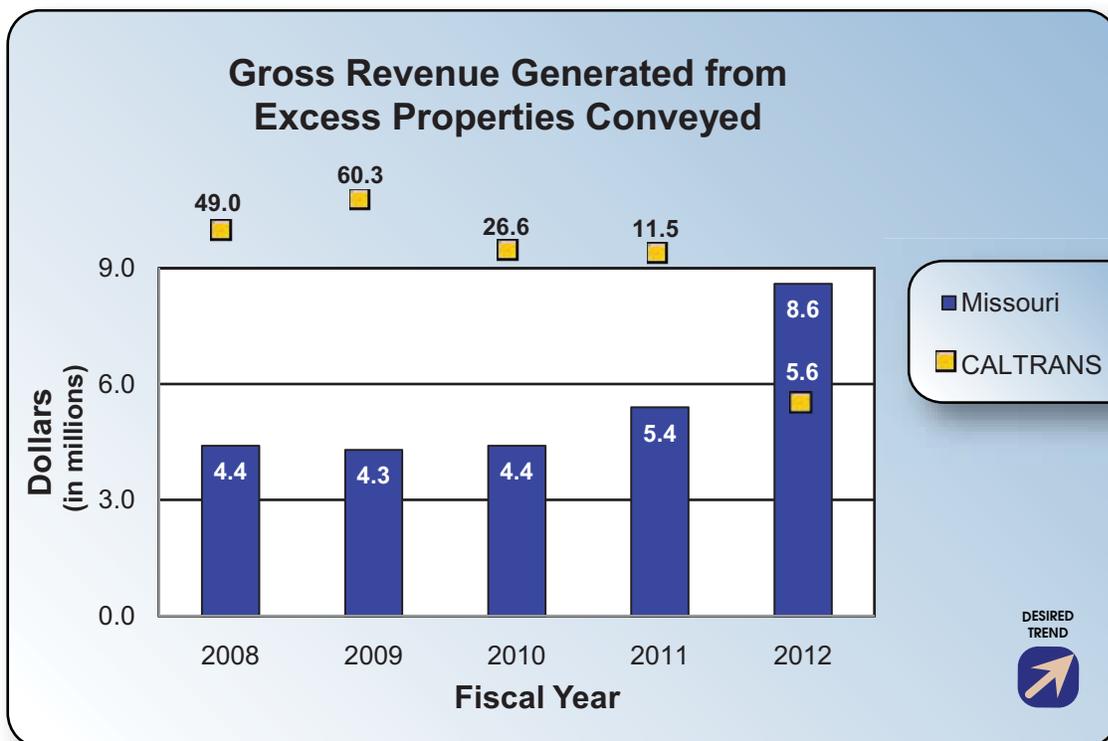
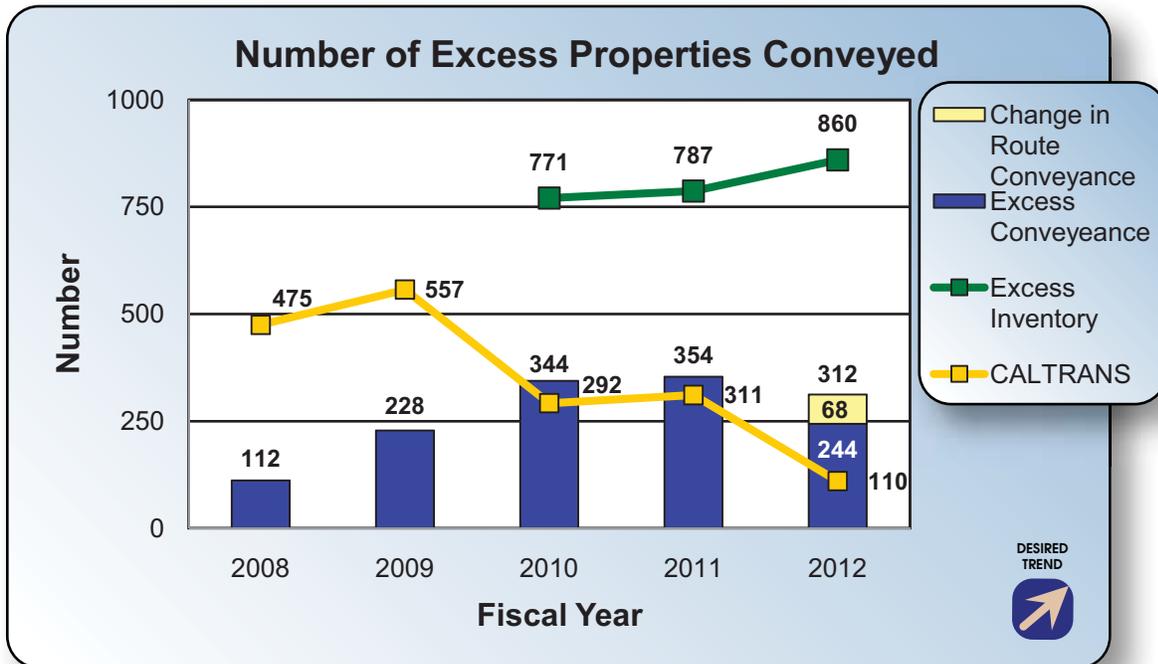
MoDOT conveyed 312 parcels in fiscal year 2012, which is less than the 354 excess parcels conveyed in FY 2011. During the fourth quarter of FY 2012, 67 excess parcels were conveyed as compared to 133 during the fourth quarter FY 2011. Revenue through the end of the fourth quarter of FY 2012 from excess sales totaled \$8,611,704, resulting in an increase of \$3,243,895 from FY 2011. Revenue came from 44 percent of the conveyances.

In May, the Northeast district auctioned three maintenance facilities that were closed as part of the Bolder Five-Year Direction. The appraised value of the three facilities totaled \$216,100. The three facilities were auctioned and generated \$442,500 in revenue. In addition, four maintenance facilities were listed for sale with a broker and immediately went under contract. The appraised value of the four facilities totaled \$336,000. The contracts total \$412,600. The Kansas City, Central, Southwest and Southeast Districts also held live auctions in the fourth quarter resulting in the sale of multiple excess properties.

In September 2011, the commission approved the conveyance of the former Brentwood maintenance facility to the Drury Development Corporation for a consideration of \$4,500,000. On June 28, the contract contingencies were satisfied and the property closed. Net proceeds to the commission totaled \$4,500,000.

The increase shown in the excess inventory is the result of adding the facilities listed for disposal in the Bolder Five-Year Direction, remnant parcels, and external requests for commission owned property.





### Cost per lane mile for highway construction improvements – 16i New!

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Natalie Roark, Bidding and Contract Services Engineer

#### **Purpose of the Measure:**

Customers will gain an understanding of what it costs for contractors to construct some of the more common types of contracted work for MoDOT.

This measure tracks the cost per lane-mile for various types of highway construction projects constructed by MoDOT's contracting partners, including:

- Seal coat, also known as chip seal
- Minor road one-inch asphalt resurfacing
- Major highway 3 ¾ inch asphalt resurfacing
- Interstate 3 ¾ inch asphalt resurfacing
- New two-lane construction
- New four-lane construction

Seal coat and asphalt resurfacing are routine pavement treatments used to keep our roads in good condition. The new two-lane construction projects consist of adding two lanes of roadway to an existing two-lane highway or a completely new two-lane highway, and the new four-lane construction projects include a completely new four-lane divided highway.

#### **Measurement and Data Collection:**

This measure includes the costs associated with the equipment, labor and fringe benefits and materials necessary to construct each of the types of projects. Data is obtained from the history of prices received from contractors over time.

The seal coat costs include the pavement material for an average ten-foot lane width one mile in length, traffic control and temporary pavement marking. The minor road one-inch asphalt resurfacing costs include the pavement material for an average 11-foot lane width one mile in length, traffic control and temporary pavement marking. The major highway and interstate asphalt resurfacing costs include the pavement material for an average 12-foot lane width one mile in length, traffic control, permanent pavement marking, rumble strips, pavement repair, guardrail and signing. The new two-lane and four-lane construction costs include grading, drainage, pavement, bridge and all incidental costs for the completed project. This is an annual measure updated each January.

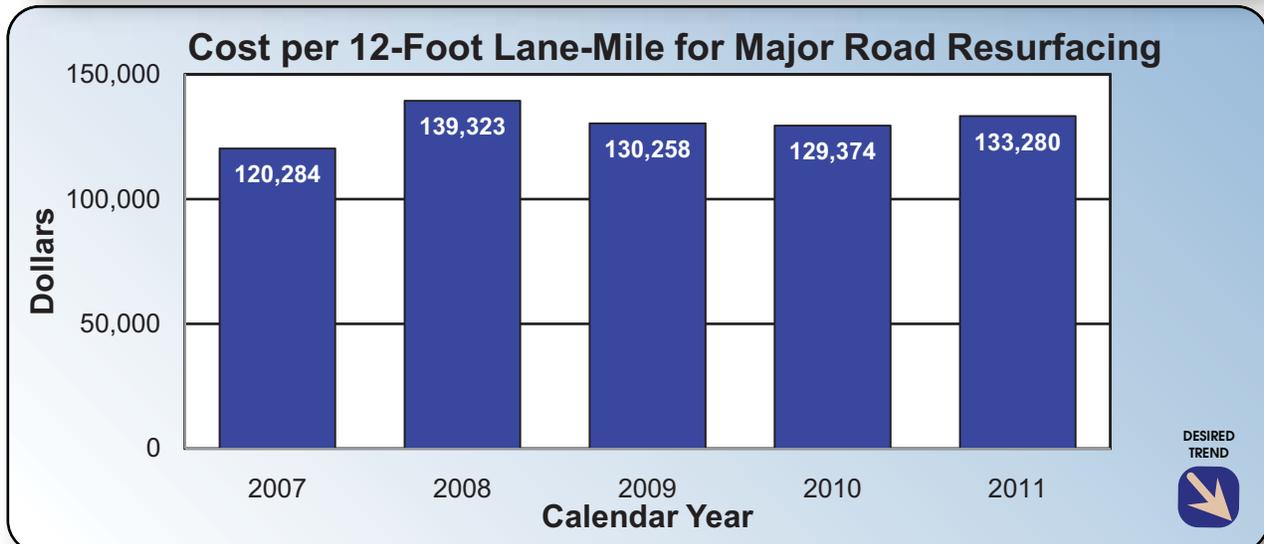
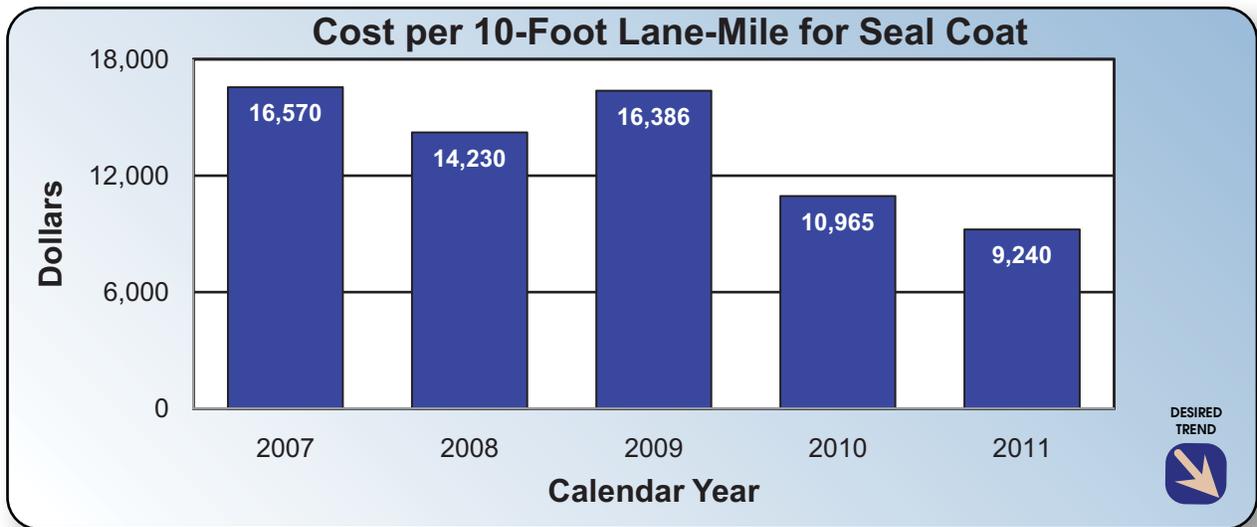
#### **Improvement Status:**

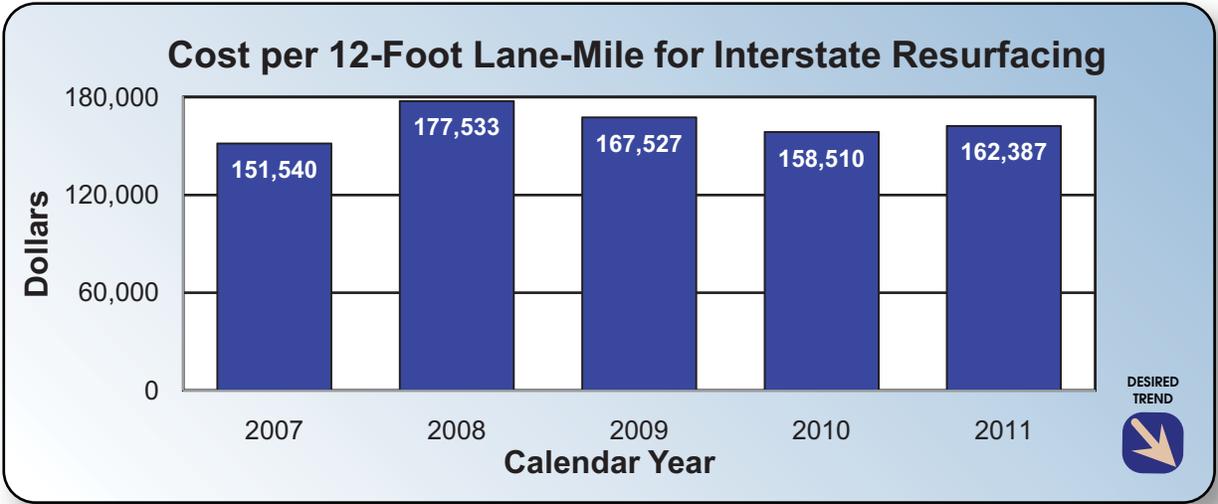
In 2011, MoDOT spent on average \$9,240 per lane-mile for contractor-performed seal coat projects. It is expected that MoDOT will receive even more competitive contractor prices as more seal coat projects are completed by contractors.

From 2009-11, MoDOT spent approximately \$50 million dollars annually on contract minor road asphalt resurfacing projects, which was a significant increase from the \$6 million dollars spent in 2008. The spike in costs in 2009 can be attributed to a combination of increased fuel and oil costs and an above average quantity of one-inch asphalt overlay work for contractors as MoDOT began shifting its focus to improving minor roads.

Increased asphalt resurfacing costs in 2008 for the major highways and interstates was due to increased fuel and oil costs and partly due to a shortage of polymer, which is a unique asphalt component used in mixes for these types of roadways. From 2009-11, asphalt resurfacing costs for these types of roadways decreased and remained stable. Factors contributing to the lower costs were the increased use of recycled material in the asphalt and also increased competition on bids.

Overall, 2010 received the highest number of bids since 1990. Less work in cities, counties and surrounding states and the shift in contractors from residential/commercial construction to highway construction resulted in continued increased competition for MoDOT. Although equipment, material and labor costs increased due to the economic downturn, MoDOT experienced only a slight increase in overall construction costs. With MoDOT's construction program reducing by half, contractors are aggressively bidding on all types of projects, but even more competition is being seen on the limited number of complex two- and four-lane projects. In addition, to maximize competition, MoDOT allows flexibility and encourages innovation for the contractor and strategically schedules its bid openings to spread out the amount of work and financial obligation for the bidders.





\*\* No four-lane projects bid in 2011.

**Average bridge costs-16j** New!

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Bill Dunn, Structural Preliminary and Review Engineer

**Purpose of the Measure:**

This measure tracks the average construction cost for bridge replacements and bridge redeckes.

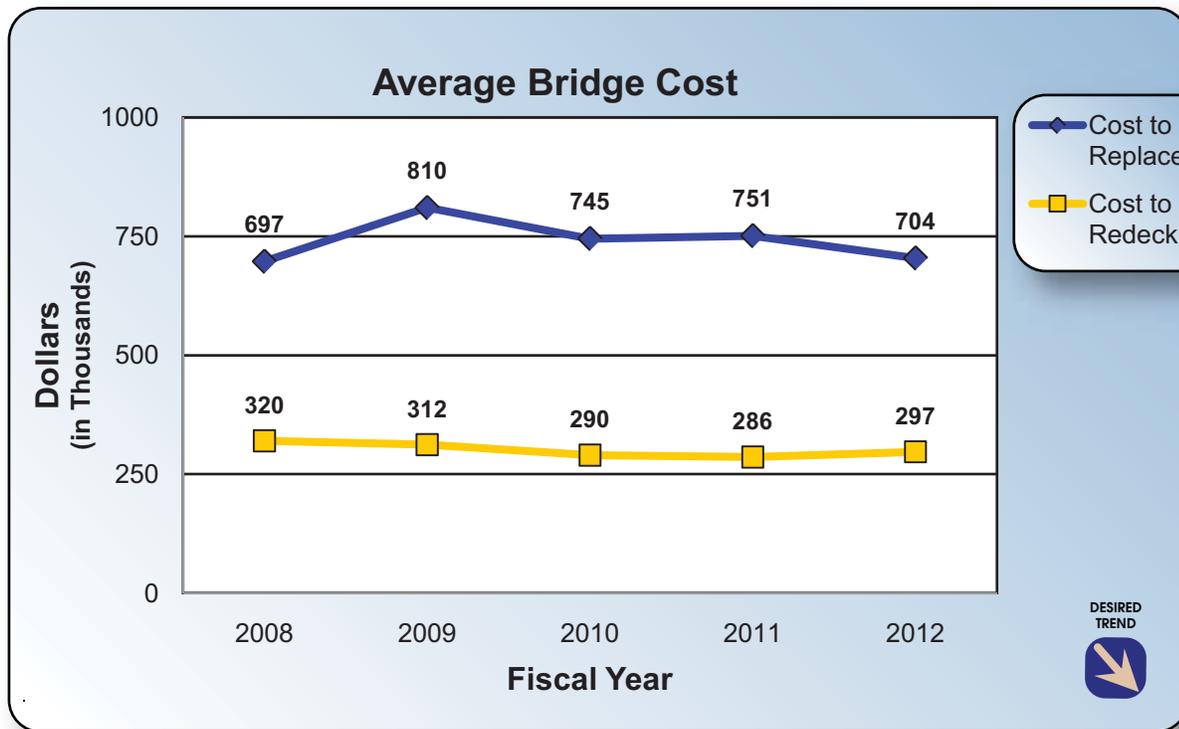
**Measurement and Data Collection:**

Data is collected from each bid letting after the commission’s award decision, and then entered into the bridge division general reports. The average cost per square-foot of bridge is tabulated and applied to a 6,800 square-foot bridge (area of the average bridge on the state system) to simplify comparison. The costs reported include all jobs processed through the normal bid letting process with the exception of major bridge projects. These are not included since

they are much more expensive than routine replacements and would significantly inflate the average cost. The cost reported includes all bridge items in the contract. This is an annual measure updated each July.

**Improvement Status:**

Great competition in recent years has caused bridge construction costs to go down slightly. The spike in replacement cost in 2009 was due to the Safe & Sound Bridge Program that flooded the bridge contractors with work, causing a temporary jump in construction cost. These costs have dropped as MoDOT’s construction program has decreased.



## Off roadway unit costs-16k New!

**Result Driver:** Roberta Broeker, Chief Financial Officer

**Measurement Driver:** Dan Niec, District Engineer

### Purpose of the Measure:

This measure tracks the average annual cost per acre of roadside vegetation managed by mowing and/or herbicide treatments and the total cost per lane mile of state highway to perform our winter operations. MoDOT has made improvements to the overall quality and efficiency of managing roadside vegetation through the development of mowing best practices and herbicide research. The majority of winter operations cost is snow removal; however other activities such as mixing winter materials and pre-treating road and bridges to prevent snow and ice accumulation are also included.

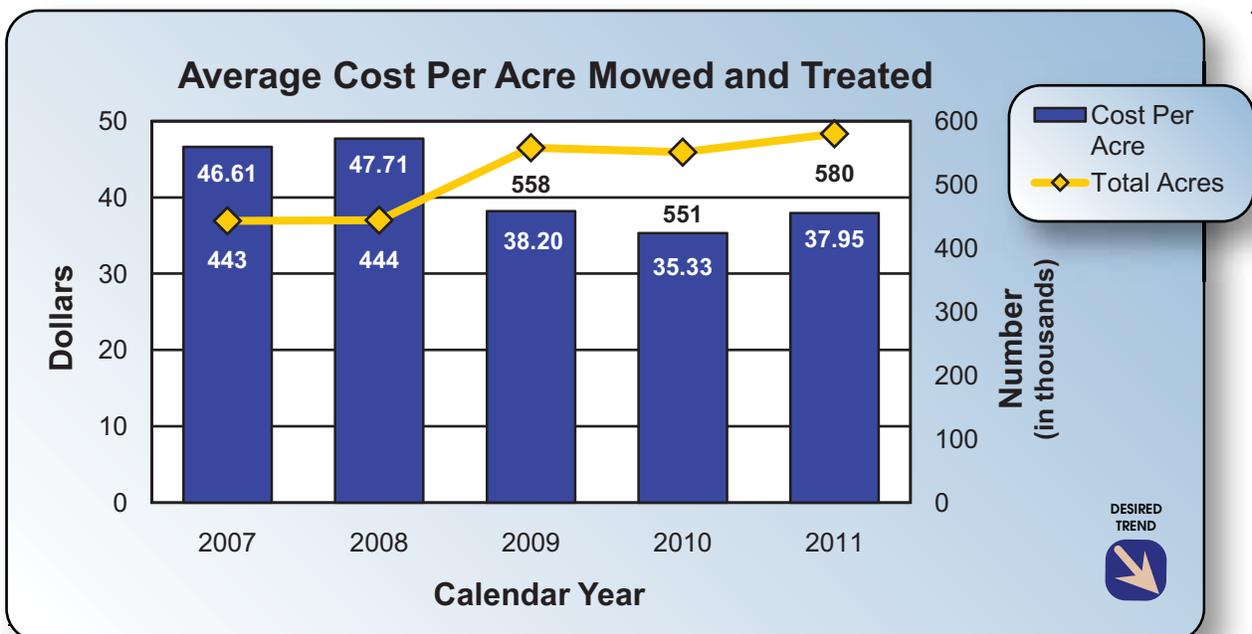
### Measurement and Data Collection:

Data for roadside vegetation and herbicide treatments is collected by input from each district into the Financial Management System and the Herbicide Database. This measure evaluates the cost of managing roadside vegetation in accordance with the Roadside Vegetation Management Policy and the Herbicide Handbook. The costs reported are a total of in-house mowing, contractor and farmer mowing and herbicide treatments for chemical mowing and the control of noxious weeds, brush and other undesirable vegetation. Snow removal data is generated by acquiring the costs of our winter

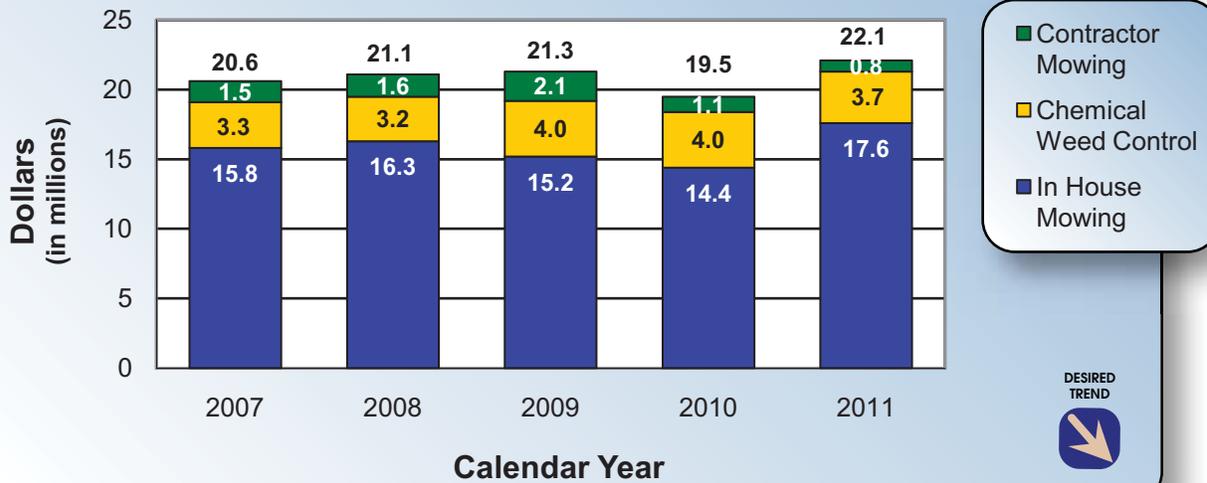
operations from monthly reports provided by the Financial Services division. These costs include labor, materials and equipment usage as reported through the Time Reporting System. The total costs are divided by the number of state system miles to achieve the cost per lane mile. This is an annual measure updated each January.

### Improvement Status:

During the spring and summer of 2011, MoDOT's roadside vegetation management direction was modified to improve consistency in mowing along all roadways. This included the reduction of the use of plant growth regulators on major roadways and mowing at four specific times: prior to Memorial Day; July 4; Labor Day and a final fall mowing. In 2011, a full mow of all minor roads met the alternate year mowing direction and MoDOT's in-house mowing costs increased by \$1 million. The light winter of 2011-12, with an average of only 5.1 inches of snow statewide, resulted in a low cost per lane mile of \$206 million for winter operations. This compares to \$547 per lane mile last year when we experienced an average of 34.9 inches of snow statewide, illustrating the fact that winter operations are an expensive emergency response activity.



### Total Cost to Manage Roadside Vegetation



### Snow Removal Cost per Lane Mile

